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EXAMINER

GRAYBILL, DAVID E

ART UNIT

PAPER NUMBER

2827

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/101,049

Applicant(s)

LEDUC ET AL.

Examiner

David E Graybill

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-29,32-46 and 49-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-29,32-46 and 49-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81. No new matter may be introduced in the required drawing.

The disclosure is objected to because drawing figures are referenced throughout the specification, but no drawings have been submitted.

Applicant is advised that should claim 49 be found allowable, claims 50 and 51 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27-29, 32-46 and 49-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to

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particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 27, the scope of the conditional limitation, "having dimensions such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions," cannot be determined because the property of the label that satisfies the condition is unknown.

In claims 28 and 29, the scope of the conditional limitation, "such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions," cannot be determined because the property of the label that satisfies the condition is unknown.

In claims 42 and 43, the scope of the language, "in the region of the region," is vague and confusing.

In claims 49-51, the language, "plain surface," cannot be understood in its context.

In claims 49-51, there is insufficient literal antecedent basis for the limitation, "said major plane surface."

In the rejections *infra*, reference labels are generally recited only for the first recitation of identical claim language.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 27 and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (JP7146922).

In the English translations and figures, Hayashi teaches the following:

27. An electronic label having dimensions such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions, comprising an electronic module having a substrate 34 with a major plane surface; a spiral antenna 32 mounted on said substrate and having a plurality of turns parallel to the major plane surface, and having an outer size; and an electronic micro circuit 40 connected to said antenna, said label having a height dimension less than .76mm

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whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

49. The label according to claim 27, wherein said substrate comprises an electronic chip card 1 of ISO 7810 mechanical size with a well 4 on one major plain surface thereof, and said antenna and microcircuit being positioned in said well below said major plane surface.

However, Hiyashi does not appear to explicitly teach the outer size in the region of 5 to 15mm.

Regardless, Hiyashi teaches that size of an electronic label is a result-effective variable. Moreover, it would have been an obvious matter of design choice bounded by well known manufacturing constraints and ascertainable by routine experimentation and optimization to choose the particular claimed dimensional limitations because applicant has not disclosed that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical, and it appears prima facie that the product would possess utility using another dimension. Indeed, it has been held that optimization of range limitations are prima facie obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or

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are otherwise critical. See MPEP 2144.05(II): "Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. '[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.'" In re Aller, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955). See also In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969), Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989), and In re Kulling, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990). As set forth in MPEP 2144.05(III), "Applicant can rebut a prima facie case of obviousness based on overlapping ranges by showing the criticality of the claimed range. 'The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range.' In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 716.02 -

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\$ 716.02(g) for a discussion of criticality and unexpected results."

Claims 29 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Jordon (5423334).

At column 15, line 33 to column 16, line 61; column 19, line 27 to column 20, line 14; and column 26, lines 31-44, Jordon teaches the following:

29. Electronic label such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions, comprising an electronic module 180 having a substrate 182 with a major plane surface, an antenna 184 and an electronic microcircuit 194, said microcircuit being connected to the antenna to enable contactless operation of the module, the whole of the antenna being arranged on the substrate and comprising turns 188 made in the plane of the substrate, said microcircuit antenna connection including said antenna having connection terminals being electrically connected to corresponding, respective contact pads 128, 130 of the microcircuit, a tuning capacitor being connected in parallel to the terminals of the antenna to the contact pads of the electronic microcircuit, the value of the capacitor being chosen to obtain an operating frequency for module in the range of approximately 1 Mhz to 450 Mhz ["4.2 Mhz"], said label having a

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height dimension less than .76mm whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

45. Electronic label in accordance with 29, wherein the substrate has its largest measurement in the region of 5 to 15mm, and said antenna, microcircuit, and capacitor, all fit on top of said substrate within said dimensions in the region of 5 to 15mm.

To further clarify the teaching of the label having a height dimension less than 0.79mm, it is noted that the teaching that the module has a thickness, "less than 2.5 millimeters," anticipates a height dimension less than 0.79mm.

To further clarify the intended use teaching, "whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card," it is noted that Jordon teaches a height less than 0.79mm, whereby, the intended use is inherently enabled.

To further clarify the teaching that the substrate has its largest measurement in the region of 5 to 15mm, it is noted that the module has a diameter in the region of 5 to 15mm ["less than or equal to approximately 20.0 millimeters"] and the substrate diameter is disclosed to be less than the module diameter.

Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan (5423334).

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Jordan is applied to claims 42 and 43 for the reasons it was applied to claim 29, and is further applied supra.

Jordon does not appear to explicitly teach the following:

42. Electronic label in accordance with 29, wherein the value of tuning capacitor is in the region of 12 to 180 picoFarad, and the operating frequency of the module is approximately 13.56 Mhz.

43. Electronic label in accordance with 29, wherein the value of turning capacitor is in the region of 30 to 500 picoFarad, and the operating frequency of the module is approximately 8.2 Mhz.

Nonetheless, it would have been an obvious matter of design choice bounded by well known manufacturing constraints and ascertainable by routine experimentation and optimization to choose the particular claimed range limitations because applicant has not disclosed that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical, and it appears prima facie that the process would possess utility using other ranges. Indeed, it has been held that optimization of range limitations are prima facie obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical.

Claims 27, 28, 32-36 and 38-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsuzaki (5604383).

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At column 6, line 57 to column 11, line 12, Matsuzaki teaches the following:

27. An electronic label having dimensions such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions, comprising an electronic module having a substrate 10 with a major plane surface; a spiral antenna 33 mounted on said substrate and having a plurality of turns parallel to the major plane surface, and having an outer size in the region of 5 to 15mm [derived from disclosure including drawings]; and an electronic micro circuit 60 connected to said antenna, said label having a height dimension less than .76mm whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

28. An electronic label such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions, comprising an electronic module having a substrate with a major plane surface; an antenna mounted on top of said substrate and having a plurality of turns parallel to the substrate major plane surface; an electronic micro circuit insulatively 34, 42 mounted on top of and electrically connected to said antenna; said electrically connected antenna and microcircuit comprising connection terminals 37a, 37b of the

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antenna and contact pads of the electronic microcircuit connected via leads 64, said label having a height dimension less than .76mm whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

32. Electronic label in accordance with 27, characterized in that the largest measurement of the electronic module is in the region of 5 to 15mm, respectively, when said antenna having an outer size respectively in the region of 5 to 15mm.

33. Electronic label in accordance with 27, wherein the antenna has an outer size in the region of 12mm [derived from disclosure including drawings].

34. Electronic label in accordance with 27, wherein the antenna spiral comprises between approximately 6 and approximately 50 turns [each antenna corner is a turn], the width of each turn being of about 50 to 300 μm ["100 μm or more"], and the space between two contiguous turns being in the region of 50 to 200 μm (derived from disclosure including drawings).

35. Electronic label in accordance with 27, wherein the outer shape of said spiral is selected from the group consisting of substantially circular, substantially square, and substantially oval.

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36. Electronic label in accordance with 27, wherein the microcircuit is placed on the same side as and astride the antenna.

38. Label according to 28, wherein said substrate has its largest dimension in said major plane in the region of 5 to 15mm, and the largest dimensions of the antenna, and microcircuit parallel to said plane are smaller than said substrate.

39. Electronic label in accordance with 28, wherein the antenna is a spiral whose outer size is in the region of 5 to 15mm, having between approximately 6 and approximately 50 turns, the width of each turn being of about 50 to 300 μm , and the space between two contiguous turns being in the region of 50 to 200 μm .

40. Electronic label in accordance with 39, wherein the outer shape of said spiral is selected from the group consisting of substantially circular, substantially square, and substantially oval.

41. Electronic label in accordance with 28, wherein the microcircuit is located on top of a central portion of the antenna.

To further clarify the teaching of the preambular limitation, "an electronic label," it is noted that the preamble is accorded little patentable weight because it merely recites the intended use of the product, the body of the claim does not

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depend on the preamble for completeness, and the structural limitations are able to stand alone. *Kropa v. Robie*, 187 F.2d at 152, 88 USPQ at 481. Moreover, the intended use as an electronic label does not structurally limit the claims, and the product of Matsuzaki can be used for the intended use.

To further clarify the teaching of the label having a height dimension less than 0.79mm, it is noted that the teaching that the module has, "a thickness of about 2 mm or less," anticipates a height dimension less than 0.79mm.

To further clarify the intended use teaching, "whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card," it is noted that Matsuzaki teaches a height less than 0.79mm, whereby, the intended use is inherently enabled.

Claims 28 and 37 are rejected under 35 U.S.C. 102(a) as being anticipated by Hayashi (JP7146922).

In the English translations and figures, Hayashi teaches the following:

28. An electronic label such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions, comprising an electronic module having a substrate 34 with a major plane surface; an antenna 32 mounted on top of said substrate and having a plurality of turns parallel to the

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substrate major plane surface; an electronic micro circuit 40 insulatively ["insulating substrate"] mounted on top of and electrically connected to said antenna; said electrically connected antenna and microcircuit comprising connection terminals [inherent structure] of the antenna and contact pads [inherent structure] of the electronic microcircuit connected via leads 44a, 44b, said label having a height dimension less than .76mm whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

37. Label according to 28, wherein said microcircuit is smaller than said antenna and is mounted thereon completely within boundaries of said antenna.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan as applied to claim 29, and further in combination with Koo (4156249).

Jordan does not appear to explicitly teach the following:

44. Electronic label in accordance with 29, wherein the tuning capacitor is obtained by depositing oxidized silicon on the surface of the microcircuit previously coated with an insulator.

Nonetheless, at column 5, line 26 to column 6, line 27, Koo teaches a tuning capacitor that is obtained by depositing oxidized silicon on the surface of a microcircuit previously

coated with an insulator. Moreover, it would have been obvious to combine the product of Koo with the product of Jordan because it would provide a capacitor.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan as applied to claim 29, and further in combination with Matsuzaki (5604383).

As cited supra, Jordan teaches wherein the antenna has a spiral shape comprising between approximately 6 and approximately 50 turns because the scope of the inclusive claim language "comprising" encompasses more than 50 turns, and Jordan teaches "approximately 600 turns."

Jordan does not appear to explicitly teach the width of each turn being about 50 to 300 μm , the space between two contiguous turns being in the region of 50 to 200 μm , and the microcircuit being mounted on top of the antenna.

Nevertheless, as applied to claims 28 and 34, Matsuzaki teaches wherein an antenna has a width of each turn being about 50 to 300 μm , the space between two contiguous turns being in the region of 50 to 200 μm , and a microcircuit being mounted on top of the antenna.

Furthermore, it would have been obvious to combine the product of Matsuzaki with the product of Jordan because it would provide a small product.

Applicant's remarks filed 1-14-02 have been fully considered and are adequately addressed in the rejection supra, and are further addressed infra.

In response to applicant's argument that Matsuzaki is non-analogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if it is not, then it must be reasonably pertinent to the particular problem with which applicant was concerned in order to be relied upon as a basis for rejection of the claimed invention. In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). In this case, as explicitly and clearly set forth in the rejection, Matsuzaki anticipates the claimed invention; therefore, Matsuzaki is both in the field of applicant's endeavor, and is reasonably pertinent to the particular problem with which applicant was concerned.

Indeed, Finn (6088230) is expressly directed to an electronic label similar to the label of the instant invention, thus the citation of Matsuzaki by Finn evidences that Matsuzaki is both in the field of applicant's endeavor, and is reasonably pertinent to the particular problem with which applicant was concerned.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any telephone inquiry of a general nature or relating to the status (MPEP 203.08) of this application or proceeding should be directed to the group receptionist whose telephone number is 703-308-1782.

Any telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (703) 308-2947. Regular office hours: Monday through Friday, 8:30 a.m. to 6:00 p.m.

The fax phone number for group 2800 is 703/305-3431.



David E. Graybill
Primary Examiner
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